

Application No. 09/821,618
Amendment Dated 9/23/05
Reply to Office Action of 7/27/05

REMARKS

This Amendment is submitted in response to the Office Action mailed on July 27, 2005. Claims 1 and 7 have been amended, and claims 1-10 remain pending in the present application. In view of the foregoing amendments, as well as the following remarks, Applicant respectfully submits that this application is in complete condition for allowance and requests reconsideration of the application in this regard.

Claims 1, 2, 4-7, 9 and 10 stand alternatively rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al., U.S. Patent No. 6,391,387 in view of Cavallaro, U.S. Patent No. 5,795,390 or Cavallaro in view of Rutledge et al. Claims 3 and 8 stand alternatively rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al. in view of Cavallaro or Cavallaro in view of Rutledge et al., and further in view of the Anorad Brochure. Lastly, claims 5, 6, 9 and 10 stand alternatively rejected under 35 U.S.C. §103(a) as being unpatentable over Rutledge et al. in view of Cavallaro or Cavallaro in view of Rutledge et al., and further in view of Ng, U.S. Patent No. 5,820,623. While Applicant respectfully traverses these rejections, Applicant has amended each of independent claims 1 and 7 to more sharply define the claimed invention over the prior art of record and respectfully requests that the rejections be withdrawn.

In particular, Applicant has amended each of independent claims 1 and 7 to recite that the linear displacement sensor (claim 1) or linear encoder (claim 7) has a first component supported by "and movable with" the support member and a second

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sensor component supported by "and movable with" the liquid dispensing head. The linear displacement sensor (claim 1) and linear encoder (claim 7) are configured to generate a signal that indicates a sensed displacement of the liquid dispensing head relative to the support member in response to contact of the liquid dispensing head with the substrate. The use of the linear displacement sensor or linear encoder in the floating head dispenser of the present invention ensures that the dispensing head is properly positioned in contact with the substrate without applying too much force that might otherwise damage the substrate (see Applicant's disclosure at Page 14, line 1 through Page 18, line 6, for example).

Applicant respectfully submits that there is no teaching or suggestion to combine the sensor assembly of Rutledge et al. into the dispensing system of Cavallaro, and certainly not in the manner claimed by Applicant in each of independent claims 1 and 7 absent use of improper hindsight by Examiner. Applicant submits that neither Rutledge et al. nor Cavallaro taken alone, or in combination with the other prior art of record, addresses the problem solved by the present invention of using a linear displacement sensor or linear encoder in combination with a floating head dispenser in the manner claimed to ensure proper positioning of the floating head dispenser relative to a substrate during a dispensing cycle.

Moreover, Applicant submits that in Rutledge et al., the sensor mechanism (674) is fixed or stationary and the tape scale (672) is mounted to the movable bracket (670) (see Col. 17, line 62 through Col. 18, line 7 and Fig. 21).

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Accordingly, Rutledge et al. fails to teach or suggest a linear displacement sensor having a first sensor component movable with a support member and a second sensor component movable with a liquid dispensing head as recited in each of independent claims 1 and 7. Rather, in Rutledge et al., the sensor mechanism (674) is fixed to the stationary support plate (680). Consequently, the hypothetical combination of Rutledge et al. and Cavallaro fails to achieve Applicant's claimed invention as recited in each of independent claims 1 and 7, and claims depending therefrom, and the rejections should be withdrawn.

Moreover, as claims 2-6 and 8-10 depend from allowable independent claims 1 and 7, respectively, and further as each of these claims recites a combination of elements not taught or suggested by the prior art of record, Applicant submits that these claims are allowable as well.

Conclusion

In view of the foregoing response including the amendments and remarks, this application is submitted to be in complete condition for allowance and early notice to this effect is earnestly solicited. If there is any issue that remains which may be resolved by telephone conference, the Examiner is invited to contact the undersigned in order to resolve the same and expedite the allowance of this application.

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Applicant does not believe that this response requires that any fees be submitted, however, if any fees are deemed necessary, these may be charged to Deposit Account No. 23-3000.

Respectfully submitted,

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